

CLAIMS

1. An image pickup system having a first image pickup unit self-containing a first image pickup element that constitutes one image pickup surface by arranging a plurality of scanning lines having a first number of pixels, a second image pickup unit self-containing a second image pickup element that constitutes one image pickup surface by arranging a plurality of scanning lines having a second number of pixels, which is more than the first number of pixels, and a camera control unit to which the first image pickup unit or the second image pickup unit are connected freely removably for signal processing, the system comprising:

first drive signal output means provided in the first image pickup unit for outputting, to the first image pickup element, a first drive signal with a first frequency, which can sequentially read, for every scanning line in image-captured signals for one screen image-captured on the image pickup surface of the first image pickup element;

first writing signal generating means provided in the first image pickup unit for generating a first writing signal with the first frequency which can sequentially write for every scanning line in image-captured signals for one screen from the first image pickup element read by the first drive signal;

second drive signal output means provided in the second image pickup unit for outputting, to the second image pickup element, a second drive signal with a second frequency which can sequentially read every scanning line in image-captured signals for one screen image-captured on the image pickup surface of the second image pickup element;

second writing signal generating means provided in the second image pickup unit for generating a second writing signal with the second frequency which can sequentially write every scanning line in image-captured signals for one screen from the second image pickup element read by the second drive signal;

a memory provided in the camera control unit for sequentially storing image-captured signals for one scan from a connected image pickup unit based on a writing signal from the connected image pickup unit;

reading means for reading image-captured signals for one scan, which is stored in the memory, with the second frequency; and

video signal processing means provided in the camera control unit for performing video-signal processing on the image-captured signals read with the second frequency from the memory by using the reading means.

2. The image pickup system according to Claim 1, wherein the video signal processing means has an enlarge/reduce

processing function for performing horizontal enlargement or reduction in accordance with an image pickup element self-contained in the connected image pickup unit.

3. The image pickup system according to Claim 1 or 2, further comprising:

superposing means for superposing an externally input image signal on an image-captured signal processed in the video signal processing means; and

superimposing position control means for controlling a superimposing position of the superposing means in accordance with an image pickup element self-contained in the connected image pickup unit.

4. An image pickup system for capturing the image of a subject, comprising:

an image pickup element that constitutes one image-captured surface by arranging a plurality of scanning lines having a first number of pixels;

a drive circuit for outputting, to the image pickup element, a drive signal with a first frequency for sequentially reading an image-captured signal image-captured on the image pickup surface of the image pickup element for every scanning line;

a line memory having a memory capacity, which can store one scanning line of image-captured signals read from the image pickup element;

a writing signal generating circuit for outputting a writing signal with the first frequency to the line memory and for writing the image-captured signal;

a reading signal generating circuit for outputting a reading signal with a second frequency, which is higher than the first frequency, to the line memory and for reading image-captured signals stored in one scanning line; and

a video signal processing circuit for performing video signal processing on the image-captured signals read with the second frequency from the line memory.

5. The image pickup system according to Claim 4, wherein the video signal processing means has an enlarge/reduce processing function for performing horizontal enlargement or reduction.

6. The image pickup system according to Claim 5, further comprising:

superposing means for superposing an externally input image signal on an image-captured signal processed in the video signal processing means; and

superimposing position control means for controlling a superimposing position of the superposing means in accordance with an image pickup element self-contained in the connected image pickup unit.

7. An image pickup system for imaging a subject, comprising:

a first image pickup unit self-containing a first image pickup element that constitutes one image-captured surface by arranging a plurality of scanning lines having a first number of pixels;

a first drive circuit provided in the first image pickup unit for outputting, to the first image pickup element, a first drive signal with a first frequency, which can sequentially read, for every scanning line, image-captured signals for one screen image-captured on the image-captured surface of the first image pickup element;

a first writing signal generating circuit for generating a first writing signal with the first frequency, which can sequentially write, for every scanning line, image-captured signals for one screen from the first image pickup element read by the first drive signal;

a second image pickup unit self-containing a second image pickup element that constitutes one imaged screen by arranging a plurality of scanning lines having a second number of pixels, which is larger than the first number of pixels;

a second drive circuit provided in the second image pickup unit for outputting, to the second image pickup element, a second drive signal with a second frequency, which can sequentially read, for every scanning line, image-captured signals for one screen image-captured on the image-

captured surface of the second image pickup element;

a second writing signal generating circuit provided in the second image pickup unit for generating a second writing signal with the second frequency, which can sequentially write, for every scanning line, image-captured signals for one screen from the second image pickup element read by the second drive signal;

a camera control unit to which the first image pickup unit or the second image pickup unit are connected freely removably,

a line memory provided in the camera control unit for sequentially storing image-captured signals for one scanning line from a connected image pickup unit based on a writing signal from the image pickup unit connected to the camera control unit;

a reading circuit for reading image-captured signals for one scanning line which are output and stored in the line memory, with the second frequency; and

a video signal processing circuit provided in the camera control unit for performing video-signal processing on the image-captured signals read with the second frequency from the line memory by using the reading circuit.